

Claims

[0115] What is claimed is:

- 1 1. A user interface for a device including a display, for manipulating an
2 object displayed on the display, the device executing program instructions for
3 providing the user interface, the user interface comprising:
4 a displayed representation of the object; and
5 a control region surrounding the displayed representation of the object
6 and comprising a plurality of zones for accepting object ma-
7 nipulation commands via an input device and via at least two
8 modes of user input.
- 1 2. The user interface of claim 1, further comprising an input device for ac-
2 cepting user input in the zones.
- 1 3. The user interface of claim 2, wherein the input device comprises at
2 least one selected from the group consisting of:
3 a tablet for detecting a stylus position;
4 a mouse;
5 a touchpad;
6 a pointing device;
7 a touch-sensitive screen;

8 a keyboard;
9 a microphone for accepting voice input; and
10 a remote controller.

1 4. The user interface of claim 1, wherein the input device comprises a
2 keyboard including keys corresponding to the zones.

1 5. The user interface of claim 1, wherein the input device comprises a
2 keyboard, and wherein standard keys on the keyboard are selectively assigned to
3 zones.

1 6. The user interface of claim 1, wherein the input device comprises a
2 keyboard including additional keys corresponding to the zones.

1 7. The user interface of claim 1, wherein the zones are arranged in a grid.

1 8. The user interface of claim 1, wherein the zones are arranged in a ma-
2 trix comprising rows of cells, and wherein the object representation is located
3 within a cell of the matrix.

1 9. The user interface of claim 1, wherein the zones are arranged in a ma-
2 trix comprising three rows of three cells each, and wherein the object representa-
3 tion is located in the center cell of the center row.

1 10. The user interface of claim 1, wherein the user input modes comprise
2 at least two selected from the group consisting of:
3 an activation command;
4 an activation command concurrent with a modifier key;
5 voice input;
6 keyboard input;
7 remote controller input;
8 mouse input;
9 stroke input; and
10 menu command selection.

1 11. The user interface of claim 1, further comprising:
2 a menu activatable by performing a menu activation command for a zone,
3 the menu comprising commands, wherein the menu is dis-
4 played in proximity to the zone upon activation.

1 12. The user interface of claim 11, wherein at least one of the menu com-
2 mands is also directly activatable by at least one of stroking, pressing a button, or
3 double-clicking within the zone.

1 13. The user interface of claim 11, wherein performing the menu activa-
2 tion command comprises positioning an on-screen cursor within the zone and
3 pressing a button.

1 14. The user interface of claim 11, wherein performing the menu activa-
2 tion command comprises issuing a voice command.

1 15. The user interface of claim 11, wherein the menu includes, for at least
2 one command, an icon indicating a stroke direction for directly activating the
3 command.

1 16. The user interface of claim 11, wherein a stroke command for a zone is
2 activatable by positioning an on-screen cursor within the zone and stroking the
3 cursor.

1 17. A computer-implemented method for manipulating an object, com-
2 prising:
3 displaying a representation of the object;
4 displaying a control region surrounding the object and comprising a plu-
5 rality of zones for accepting object manipulation commands on
6 the object via at least two modes of user input;
7 receiving user input in one of the zones; and

8 responsive to the user input, changing a characteristic of the object.

1 18. The method of claim 17, wherein each mode of user input comprises

2 one selected from the group consisting of:

3 stylus position input;

4 mouse input;

5 touchpad input;

6 pointing device input;

7 touch-sensitive screen input;

8 keyboard input;

9 voice input; and

10 remote controller input.

1 19. The method of claim 17, wherein one mode of user input comprises

2 receiving keyboard input from a keyboard including keys corresponding to the

3 zones.

1 20. The method of claim 17, wherein one mode of user input comprises

2 receiving keyboard input from a keyboard having standard keys on the key-

3 board selectively assigned to zones.

1 21. The method of claim 17, wherein one mode of user input comprises
2 receiving keyboard input from a keyboard including additional keys correspond-
3 ing to the zones.

1 22. The method of claim 17, wherein the zones are arranged in a grid.

1 23. The method of claim 17, wherein the zones are arranged in a matrix
2 comprising rows of cells, and wherein the object representation is located within
3 a cell of the matrix.

1 24. The method of claim 17, wherein the zones are arranged in a matrix
2 comprising three rows of three cells each, and wherein the object representation
3 is located in the center cell of the center row.

1 25. The method of claim 17, further comprising:
2 responsive to a menu activation command, displaying a menu for a zone,
3 the menu comprising commands, wherein the menu is dis-
4 played in proximity to the zone upon activation;

1 26. The method of claim 25, wherein at least one of the menu commands
2 is also directly activatable by at least one of stroking, pressing a button, or dou-
3 ble-clicking within the zone.

1 27. The method of claim 25, wherein the menu activation command com-
2 prises positioning an on-screen cursor within the zone and pressing a button.

1 28. The method of claim 25, wherein the menu activation command com-
2 prises a voice command.

1 29. The method of claim 25, wherein the menu includes, for at least one
2 command, an icon indicating a stroke direction for directly activating the com-
3 mand.

1 30. The method of claim 25, wherein the menu indicates a double-click
2 command for direct activation of each directly activatable command.

1 31. The method of claim 25, wherein a stroke command for a zone is acti-
2 vatable by positioning an on-screen cursor within the zone and stroking the cur-
3 sor.

1 32. The method of claim 25, wherein a double-click command for a zone
2 is activatable by positioning an on-screen cursor within the zone and double-
3 clicking.

1 33. In a user interface including a plurality of stroke commands for a
2 zone, a computer-implemented method for manipulating an object, comprising:

3 responsive to a stroke along a first axis of a zone proximate the object,
4 changing a characteristic of the object by a first increment; and
5 responsive a stroke along a second axis of the zone, changing the charac-
6 teristic of the object by a second increment different from the
7 first increment.

1 34. The method of claim 33, wherein the second increment is of smaller
2 magnitude than the first increment.

1 35. The method of claim 33, wherein the second axis is perpendicular to
2 the first axis.

1 36. The method of claim 35, wherein one axis is vertical, and the other
2 axis is horizontal.

1 37. The method of claim 33, wherein the characteristic of the object is one
2 selected from the group consisting of:

3 a start position;

4 an end position;

5 a duration;

6 a size;

7 a length;

8 a date;

- 9 a time;
- 10 a numeric value;
- 11 a width;
- 12 a height;
- 13 an image cropping specification;
- 14 a thickness;
- 15 a decimal place location;
- 16 playing speed;
- 17 playing position;
- 18 a leading character;
- 19 a terminating character;
- 20 a location;
- 21 an alignment;
- 22 a rotation;
- 23 a font;
- 24 a style;
- 25 a capitalization;
- 26 a color;
- 27 an opacity;
- 28 a brightness; and
- 29 a relative volume.

1 38. The method of claim 33, further comprising:
2 responsive to the user input comprising a menu activation command:
3 displaying a menu comprising commands;
4 accepting a second user input selecting a command from the
5 menu; and
6 responsive to the menu command, changing a characteristic of
7 the object.

1 39. A computer program product for manipulating an object, comprising:
2 a computer-readable medium; and
3 computer program code, encoded on the medium, for:
4 displaying a representation of the object;
5 displaying a control region surrounding the object and comprising
6 a plurality of zones for accepting object manipulation
7 commands on the object via at least two modes of user
8 input;
9 receiving user input in one of the zones; and
10 responsive to the user input, changing a characteristic of the object.

1 40. The computer program product of claim 39, wherein each mode of
2 user input comprises one selected from the group consisting of:

3 stylus position input;
4 mouse input;
5 touchpad input;
6 pointing device input;
7 touch-sensitive screen input;
8 keyboard input;
9 voice input; and
10 remote controller input.

1 41. The computer program product of claim 39, wherein one mode of user
2 input comprises receiving keyboard input from a keyboard including keys corre-
3 sponding to the zones.

1 42. The computer program product of claim 39, further comprising com-
2 puter program code for:

3 responsive to a menu activation command, displaying a menu for a zone,
4 the menu comprising commands, wherein the menu is dis-
5 played in proximity to the zone upon activation;

1 43. The computer program product of claim 42, wherein at least one of
2 the menu commands is also directly activatable by at least one of stroking, press-
3 ing a button, or double-clicking within the zone.

1 44. The computer program product of claim 42, wherein the menu in-
2 cludes, for at least one command, an icon indicating a stroke direction for di-
3 rectly activating the command.

1 45. In a user interface including a plurality of stroke commands for a
2 zone, a computer-implemented computer program product for manipulating an
3 object, comprising:

4 a computer-readable medium; and

5 computer program code, encoded on the medium, for:

6 responsive to a stroke along a first axis of a zone proximate the ob-

7 ject, changing a characteristic of the object by a first in-

8 crement; and

9 responsive a stroke along a second axis of the zone, changing the

10 characteristic of the object by a second increment differ-

11 ent from the first increment.

1 46. The computer program product of claim 45, wherein the characteristic
2 of the object is one selected from the group consisting of:

3 a start position;

4 an end position;

5 a duration;

- 6 a size;
- 7 a length;
- 8 a date;
- 9 a time;
- 10 a numeric value;
- 11 a width;
- 12 a height;
- 13 an image cropping specification;
- 14 a thickness;
- 15 a decimal place location;
- 16 playing speed;
- 17 playing position;
- 18 a leading character;
- 19 a terminating character;
- 20 a location;
- 21 an alignment;
- 22 a rotation;
- 23 a font;
- 24 a style;
- 25 a capitalization;
- 26 a color;

27 an opacity;
28 a brightness; and
29 a relative volume.

1 47. The computer program product of claim 45, further comprising:
2 responsive to the user input comprising a menu activation command:
3 displaying a menu comprising commands;
4 accepting a second user input selecting a command from the
5 menu; and
6 responsive to the menu command, changing a characteristic of
7 the object.

1 48. A system for manipulating an object displayed on a display, compris-
2 ing:
3 a display, for displaying a representation of the object and for displaying a
4 control region surrounding the displayed representation of the
5 object and comprising a plurality of zones for accepting object
6 manipulation commands via an input device and via at least
7 two modes of user input;
8 an input device for accepting user input in the zones; and
9 a processor, coupled to the display and to the input device, for executing
10 an object manipulation command in response to the user input.

1 49. The system of claim 48, wherein the input device comprises at least
2 one selected from the group consisting of:
3 a tablet for detecting a stylus position;
4 a mouse;
5 a touchpad;
6 a pointing device;
7 a touch-sensitive screen;
8 a keyboard;
9 a microphone for accepting voice input; and
10 a remote controller.

1 50. The system of claim 48, wherein the input device comprises a key-
2 board including keys corresponding to the zones.

1 51. The system of claim 48, wherein the input device comprises a key-
2 board, and wherein standard keys on the keyboard are selectively assigned to
3 zones.

1 52. The system of claim 48, wherein the input device comprises a key-
2 board including additional keys corresponding to the zones.

1 53. The system of claim 48, wherein the zones are arranged in a grid.

1 54. The system of claim 48, wherein the zones are arranged in a matrix
2 comprising rows of cells, and wherein the object representation is located within
3 a cell of the matrix.

1 55. The system of claim 48, wherein the zones are arranged in a matrix
2 comprising three rows of three cells each, and wherein the object representation
3 is located in the center cell of the center row.

1 56. The system of claim 48, wherein the user input modes comprise at
2 least two selected from the group consisting of:
3 an activation command;
4 an activation command concurrent with a modifier key;
5 voice input;
6 keyboard input;
7 remote controller input;
8 mouse input;
9 stroke input; and
10 menu command selection.

1 57. The system of claim 48, wherein, responsive to the input device receiv-
2 ing a menu activation command for a zone, the display further displays, in prox-
3 imity to the zone upon activation, a menu comprising commands.

1 58. The system of claim 57, wherein at least one of the menu commands is
2 also directly activatable by at least one of stroking, pressing a button, or double-
3 clicking within the zone.

1 59. The system of claim 57, wherein the menu includes, for at least one
2 command, an icon indicating a stroke direction for directly activating the com-
3 mand.

1 60. The system of claim 57, wherein a stroke command for a zone is acti-
2 vatable by positioning an on-screen cursor within the zone and stroking the cur-
3 sor.